

What is claimed is:

CLAIMS

1. A computer program product, tangibly embodied in an information carrier, the computer program product comprising instructions operable to cause data processing apparatus to:

5 identify one or more selection data elements in a client request, where each selection data element specifies an adapter type, a client type, or data describing the client; and
select an adapter to communicate with the client based on the selection data elements.

2. The product of claim 1, wherein the instructions to select an adapter comprise instructions to:

10 perform a multi-stage selection process to select an adapter, the multi-stage selection process comprising:

performing an adapter-request process for selecting an adapter based on the selection data elements that specify the adapter type;

15 if the adapter-request process fails to select an adapter, performing a client-identification process for selecting an adapter based on the selection data elements that specify the client type; and

if the client-identification process fails to select an adapter, performing a client-description process for selecting an adapter based on the selection data elements that specify data describing the client.

20 3. The product of claim 1, wherein the selected adapter makes use of a client capability particular to the client.

4. The product of claim 3, wherein the client capability comprises the capability to execute instructions in a scripting language.

5. The product of claim 1, wherein the operation to select an adapter comprises:

identifying multiple adapters suitable for communicating with the client; and

25 selecting an adapter from the multiple adapters that makes use of a particular client capability.

6. The product of claim 1, wherein the operation to select an adapter comprises:
identifying multiple adapters suitable for communicating with the client; and
selecting an adapter from the multiple adapters that requires the least communication with
the client.
- 5 7. The product of claim 1, wherein the client has multiple client capabilities, and wherein
the operation to select an adapter comprises:
identifying multiple adapters suitable for communicating with the client; and
selecting an adapter from the multiple adapters that is operable to make use of the
greatest set of the multiple client capabilities.
- 10 8. The product of claim 1, wherein the adapter is selected from a plurality of adapters stored
on a server, the plurality of adapters including one or more of a mobile adapter for a client
that comprises a mobile device, an HTML adapter for a client that supports HTML, an XML
adapter for a client that supports XML, an RMI adapter for a client that supports RMI, and a
JavaScript adapter for a client that supports JavaScript.
- 15 9. The product of claim 2, wherein the client-description process comprises:
using the specification of data describing the client to identify a client capability; and
wherein the adapter selected to communicate with the client conforms to the client
capability.
10. The product of claim 9, wherein the client capability is a screen size.
- 20 11. The product of claim 2, wherein the client-identification process comprises looking up
the specification of the client type in a table.
12. The product of claim 1, wherein the specification of the client type comprises a
specification of a browser and version number.

13. A system comprising:

a server operable to run an application;

a plurality of client-specific adapters, each adapter in the plurality enabling communication between the application on the server and a client; and

a client abstraction layer operable to:

identify one or more selection data elements in a client request, where each selection data element specifies an adapter type, a client type, or data describing the client; and

select an adapter to communicate with the client based on the selection data elements.

14. The system of claim 13, wherein the operation to select an adapter comprises:

performing a multi-stage selection process to select an adapter, the multi-stage selection process comprising:

performing an adapter-request process for selecting an adapter based on the selection data elements that specify the adapter type;

if the adapter-request process fails to select an adapter, performing a client-identification process for selecting an adapter based on the selection data elements that specify the client type; and

if the client-identification process fails to select an adapter, performing a client-description process for selecting an adapter based on the selection data elements that specify data describing the client.

15. The system of claim 13, wherein the adapter is selected from a plurality of adapters stored on a server, the plurality of adapters including one or more of a mobile adapter for a client that comprises a mobile device, an HTML adapter for a client that supports HTML, an XML adapter for a client that supports XML, an RMI adapter for a client that supports RMI, and a JavaScript adapter for a client that supports JavaScript.

16. A method comprising:

identifying one or more selection data elements in a client request, where each selection data element specifies an adapter type, a client type, or data describing the client; and

selecting an adapter to communicate with the client based on the selection data elements.

17. The method of claim 16, wherein selecting an adapter comprises:

performing a multi-stage selection process to select an adapter, the multi-stage selection process comprising:

5 performing an adapter-request process for selecting an adapter based on the selection data elements that specify the adapter type;

if the adapter-request process fails to select an adapter, performing a client-identification process for selecting an adapter based on the selection data elements that specify the client type; and

10 if the client-identification process fails to select an adapter, performing a client-description process for selecting an adapter based on the selection data elements that specify data describing the client.

18. An apparatus comprising:

means for identifying one or more selection data elements in a client request, where each selection data element specifies an adapter type, a client type, or data describing the client;
15 and

means for selecting an adapter to communicate with the client based on the selection data elements.

19. The apparatus of claim 18, wherein the means for selecting an adapter comprises:

20 performing a multi-stage selection process to select an adapter, the multi-stage selection process comprising:

performing an adapter-request process for selecting an adapter based on the selection data elements that specify the adapter type;

25 if the adapter-request process fails to select an adapter, performing a client-identification process for selecting an adapter based on the selection data elements that specify the client type; and

if the client-identification process fails to select an adapter, performing a client-description process for selecting an adapter based on the selection data elements that specify data describing the client.

20. The apparatus of claim 18, wherein the adapter is selected from a plurality of adapters stored on a server, the plurality of adapters including one or more of a mobile adapter for a client that comprises a mobile device, an HTML adapter for a client that supports HTML, an XML adapter for a client that supports XML, an RMI adapter for a client that supports RMI, and a JavaScript adapter for a client that supports JavaScript.
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